

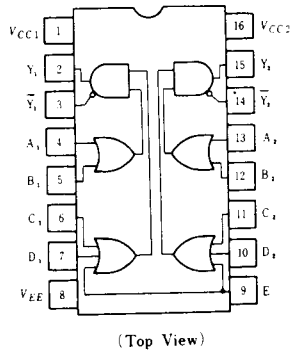
# HD10117

## Dual 2-wide 2-3-input OR-AND/OR-AND-INVERT Gates

The HD10117 is designed for use as a data control of digital Multiplexer, data distribution and etc..

The E input (pin 9) is the common input of dual gates.

### ■ PIN ARRANGEMENT



### ■ DC CHARACTERISTICS ( $V_{EE} = -5.2V$ , $T_a = -30 \sim +85^\circ C$ )

Item	Symbol	Test Condition	min	typ	max	* Unit	
Supply Current	$I_{EE}$		25°C	—	20	26 mA	
Input Current	$I_{IH}$	$V_{IH} = -0.810V$	E input	25°C	—	350	μA
			Other inputs	25°C	—	265	
	$I_{IL}$	$V_{IL} = -1.850V$	25°C	0.5	—	—	μA
			25°C	—	—	—	—
Output Voltage	$V_{OH}$	$V_{IH} = -0.890V$ or $V_{IL} = -1.890V$	-30°C	-1.060	—	-0.890	V
		$V_{IH} = -0.810V$ or $V_{IL} = -1.850V$	25°C	-0.960	—	-0.810	
		$V_{IH} = -0.700V$ or $V_{IL} = -1.825V$	85°C	-0.890	—	-0.700	
	$V_{OL}$	$V_{IL} = -1.890V$ or $V_{IH} = -0.890V$	-30°C	-1.890	—	-1.675	V
		$V_{IL} = -1.850V$ or $V_{IH} = -0.810V$	25°C	-1.850	—	-1.650	
		$V_{IL} = -1.825V$ or $V_{IH} = -0.700V$	85°C	-1.825	—	-1.615	
Output Threshold Voltage	$V_{OHA}$	$V_{IHA} = -1.205V$ or $V_{ILA} = -1.500V$	-30°C	-1.080	—	—	V
		$V_{IHA} = -1.105V$ or $V_{ILA} = -1.475V$	25°C	-0.980	—	—	
		$V_{IHA} = -1.035V$ or $V_{ILA} = -1.440V$	85°C	-0.910	—	—	
	$V_{OLA}$	$V_{ILA} = -1.500V$ or $V_{IHA} = -1.205V$	-30°C	—	—	-1.655	V
		$V_{ILA} = -1.475V$ or $V_{IHA} = -1.105V$	25°C	—	—	-1.630	
		$V_{ILA} = -1.440V$ or $V_{IHA} = -1.035V$	85°C	—	—	-1.595	

### ■ AC CHARACTERISTICS ( $V_{EE} = -3.2V$ , $V_{CC} = +2.0V$ , $T_a = -30 \sim +85^\circ C$ )

Item	Symbol	Test Condition	min	typ	max	Unit	
Propagation Delay Time	$t_{PLH}$	$R_L = 50\Omega$	-30°C	1.4	—	3.9	ns
			25°C	1.4	2.3	3.4	
			85°C	1.4	—	3.8	
	$t_{PHL}$		-30°C	1.4	—	3.9	ns
			25°C	1.4	2.3	3.4	
			85°C	1.4	—	3.8	
Rise/Fall Time	$t_{TLH}$	-30°C	0.9	—	4.1	ns	
		25°C	1.1	2.2	4.0		
		85°C	1.1	—	4.6		
	$t_{THL}$	-30°C	0.9	—	4.1	ns	
		25°C	1.1	2.2	4.0		
		85°C	1.1	—	4.6		

Note) Please refer to test circuit and waveform of common item.